Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

CONCLUSIONS: This extensive proteomic study sheds light on the possible effects of SARS-CoV2 infection on reproductive functions and subsequently on male fertility even after apparent recovery from viral infection.

IMPACT STATEMENT: The semen proteomic analysis of the COVID-19 recovered patients portrays a clear scenario of alteration of reproductive function in response to viral infection after clinical recovery, thus corroborating a possibility of virus-mediated impact on male infertility. A similar kind of study on large cohort will also direct the way to combat the viral effect on male reproductive function. This study would guide clinicians in counselling couples affected by COVID-19 as to the possible short term and long term effects on male reproductive potential.

P-452 6:30 AM Wednesday, October 20, 2021

TELEHEALTH DURING THE COVID-19 PANDEMIC: WHAT YOUR PATIENTS ARE REALLY THINKING. Melissa A. Mathes, MD,[1] Valentina A. Bertrand, BS,[2] Stephanie Gustin, MD[1] [1]The University of Nebraska Medical Center, Omaha, NE; [2]Heartland Center for Reproductive Medicine, Omaha, NE.

OBJECTIVE: Prior to the COVID-19 pandemic, most telemedicine visits were used to provide subspecialty care to patients in rural settings. In general, it is known that telemedicine appointments facilitate care in eliminating patients' waiting time, travel time, and travel expenses. With the current pandemic, many institutions and clinics are turning to virtual care to limit exposures. 46% of consumers are using telemedicine now, compared to 11% in 2019 (1). Overall, patients are satisfied with their care during telemedicine visits. However, patient satisfaction within the infertility population has not specifically been addressed. Our objective is to quantify patient satisfaction in telemedicine visits during infertility care.

MATERIALS AND METHODS: After IRB approval, electronic surveys were sent to all patients who received care through a telemedicine appointment at an academic affiliated private practice infertility clinic. Collection date of surveys occurred from August 5, 2020 to January 9, 2021.

RESULTS: 112 surveys were completed, both in English and Spanish. 38% of respondents were new patients to the practice. 57% of respondents completed the telemedicine appointment with a partner. When asked which of the following ways did the telemedicine appointment aid you, 73% indicate a reduction in travel time, 68.8% indicate the ability to stay home and 36.6% the ability to stay at work. All respondents felt a sense of privacy and/or security during the appointment. Additionally, all respondents felt there was sufficient time for discussion with the provider and they all felt they could ask questions. 95.5% felt extremely satisfied or satisfied with their care. Of the patients who previously had an in-person visit, 16% would prefer telemedicine for all visits, 62.5% would like telemedicine for some appointments and 21.4% prefer in-person visits but would use telemedicine if necessary. All respondents stated they would recommend telemedicine to other women seeking infertility care.

CONCLUSIONS: Almost all patients were satisfied or extremely satisfied with their care they received during their telemedicine appointments. While many continue to prefer in-person visits, providers should continue to offer telemedicine options for patients despite relaxation of restrictions from the COVID-19 pandemic. It is imperative that we continue to modify practice patterns to allow for smooth integration of telemedicine within our practice while maximizing patient satisfaction.

IMPACT STATEMENT: With the COVID-19 pandemic, telemedicine is being used at record numbers. The infertility community needs to continue to provide telemedicine as an option for patients despite relaxation of COVID-19 restrictions.

References: 1. McKinsey and Company. Telehealth: a quarter-trillion-dollar post COVID-19 reality? May 29, 2020. Available at: https://www.mckinsey.com/industries/ healthcare-systems-and-services/our-insights/telehealth-a-quarter-trillion- dollar-post-covid-19-reality

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EFFECT OF COVID-19 mRNA VACCINES ON SPERM QUALITY. Daniel Gonzalez, B.S.,[1] Daniel E. Nassau, MD,[1] Kajal Khodamoradi, PhD,[1] Emad Ibrahim, MD, HCLD(ABB),[1] Ruben Blachman-Braun, M.D., M.Sc.,[1] Justin M. Dubin, MD,[2] Jesse Ory, MD,[3] Ranjith Ramasamy, M.D[1] [1]University of Miami Miller School of Medicine, Miami, FL; [2]Northwestern University Feinberg School of Medicine, Chicago, IL; [3]University of Miami, Miami, FL.

OBJECTIVE: Fertility related safety data was neither reported in the clinical trials nor evaluated in animal models prior to emergency use authorization (EUA) for two novel mRNA vaccines, BNT162b2 and mRNA-127.[1,2] Despite excellent safety profiles for both vaccines, 44% of Americans are hesitant in receiving the vaccine. Although the specific reasons for COVID-19 vaccine hesitancy are unknown, concerns over fertility has previously decreased other vaccine uptake. As COVID-19 vaccination in the United States opens to children and adolescents, evaluating any potential impact of the vaccine on male reproduction is imperative for public reassurance. We hypothesized that since both vaccines only contain mRNA encoding the SARS-CoV-2 spike protein without biologic ability to replicate live virus, the vaccines would not decrease semen parameters.

MATERIALS AND METHODS: We conducted a single-center prospective cohort study after IRB approval from the University of Miami (#20201451). Healthy men aged 18-50 scheduled for mRNA COVID-19 vaccination in Miami, Florida were recruited.Participants provided a semen sample after 2-7 days of abstinence, prior to receiving the first dose of either vaccine and about 72 days after the second dose. Specimens were self-collected into a wide-mouth sterile container and semen analysis (SA) performed by HCLD trained andrology clinicians examined semen volume, concentration, motility, and total motile sperm count (TMSC).

RESULTS: 45 men provided a semen sample. Neither median sperm concentration nor total motile sperm count (TMSC) declined post vaccination (Figure 1). There was no clinically significant change in TMSC. Only 12 (26.6%) men had a marginal decrease in TMSC. In fact, the remaining 33 (73.3%) men demonstrated normal sperm parameters. Importantly, 8 (17%) men with oligospermia prior to vaccination did not experience a decrease in spermatogenesis. Only one subject had an abnormal TMSC (TMSC $\leq$ 9) after vaccination.

TABLE 1. Semen analysis parameters change before and after COVID-19 vaccine.

	Baseline (n = 45)	Follow-up (n = 45)	p-value
Volume (mL)	2.2 [1.5 - 2.8]	2.7 [1.8 - 3.6]	0.012
Sperm concentration (million/mL)	26 [19.5 - 34]	30 [21.5 - 40.5]	0.017
Total motility (%)	58 [52.5 - 65]	65 [58 - 70]	0.001
TMSC (million)	36 [18 - 51]	44 [27.5 - 98]	0.001

CONCLUSIONS: After receiving the two doses of the vaccines, we did not observe a clinically significant sperm parameter decline within the cohort, suggesting the vaccines do not negatively impact male fertility potential.

IMPACT STATEMENT: This is the first male fertility evaluation of the COVID-19 mRNA vaccines, in which we found that the vaccines do not negatively impact semen parameters.

References: 1.Polack FP, Thomas SJ, Kitchin N, et al. Safety and Efficacy of the BNT162b2 mRNA Covid-19 Vaccine. *N Engl J Med.* 2020;383(27):2603-2615. doi:10.1056/NEJMoa2034577

2. Baden LR, El Sahly HM, Essink B, et al. Efficacy and Safety of the mRNA-1273 SARS-CoV-2 Vaccine. *N Engl J Med.* 2021;384(5):403-416. doi:10.1056/NEJMoa2035389

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THE EFFECT OF TELEMEDICINE DURING THE COVID-19 PANDEMIC ON IVF TREATMENT. Einav kadour-Peero, MD, Ido Feferkorn, MD, Ranit Hizkiyahu, MD, Ezgi Demirtas, MD McGill University Health Center, Momtreal QC, Canada.

OBJECTIVE: To assess the effect of telemedicine during the COVID-19 pandemic year on the treatment decision of new patient for IVF (in-vitro fertilization) protocols, medication doses and clinical outcomes compared to new patients seen in-person during the previous year, in an academic fertility practice.